



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1430
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,136	02/14/2002	Hideki Yamauchi	MRS1118714	2912

26389 7590 02/10/2006

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER

YIMAM, HARUN M

ART UNIT	PAPER NUMBER
----------	--------------

2611

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/077,136	YAMAUCHI ET AL.	
	Examiner	Art Unit	
	Harun M. Yimam	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/27/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4,6-10,12-14 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4,6-10,12-14 and 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/27/2005 have been fully considered but are moot in view of the new grounds of rejection.

2. In response to applicant's argument (page 7, 3rd paragraph) that Christopoulos' "bit rate" does not mean "transmission rate of a network", Applicant should note that claim 2 calls for "*a control unit that calculates information concerning the transmission rate*". Christopoulos teaches transmitting data quickly to a client based on bit rate (paragraph 0039, lines 11-13). For example, an image stored at 2bpp (bits per pixel) may have to be transcoded at 0.5 bits per pixel in order to be transmitted quickly to a client. Transcoding at 0.5 bits per pixel is "information concerning the transmission rate". Therefore, Christopoulos' disclosure reads on the claimed limitation.

3. In response to applicant's argument (page 8, 5th paragraph) that Enari does not disclose controlling the amount of image data to be transmitted without reducing the number of frames included in said motion picture, Applicant should note that as originally cited in column 7, line 56 – column 8, line 7, the data per picture plane (frame) is maintained during transmission, thereby transmitting the moving image data without reducing the number of frames included in said motion picture.

4. In response to applicant's argument (page 10, 2nd paragraph) that Ejiri does not disclose that the amount of received data is monitored and a transmission apparatus is instructed to terminate transmission of said image data when the receiving apparatus receives a predetermined component of the image data, Applicant should note that Ejiri explicitly discloses that the buffer occupancy information is inputted to the quantization controlling block (107 in figure 1), so that each buffer does not overflow or underflow (paragraph 0040, lines 1-7). Therefore, the quantization controlling block transmits instruction to terminate the transmission of image data, when the receiving apparatus has received the predetermined component of image data, so as to prevent buffer overflow.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2, 3, 8, 10, 12-14, 18, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Christopoulos (US 2001/0047517).

Considering claim 2, Christopoulos discloses an image data transmission apparatus (paragraph 0035, lines 1-4) comprising: a transmission unit (110 in figure 1) that transmits image data; and a control unit (125 in figure 1) calculates information (transcoder hints—paragraph 0035, lines 8-13) concerning the transmission rate on the basis of a measured value of the transmission rate of a network (network characteristics—paragraph 0035, lines 8-11, paragraph 0039, lines 5-26, and figure 3) through which said image data are to be transmitted and controls the amount of image data to be transmitted in accordance with said information.

As for claim 3, Christopoulos discloses an image data transmission apparatus (paragraph 0035, lines 1-4) comprising: a transmission unit (110 in figure 1) that transmits image data; and a control unit (125 in figure 1) that obtains a measured value of the transmission rate while transmitting said image data and controls the amount of image data to be transmitted in accordance with said measured value (paragraph 0039, lines 5-26).

Regarding claim 8, Christopoulos discloses a compression unit that compresses said image data to be transmitted; wherein said control unit controls said compression

unit to adjust resolution of said image data in accordance with said information (paragraph 0039, paragraph 0040, lines 1-12 and paragraph 0047, lines 1-29).

As for claim 10, Christopoulos discloses a compression unit that compresses said image data to be transmitted; wherein said control unit controls said compression unit to reduce bit numbers dedicated to each pixel of said image data in accordance with said information (paragraph 0039, lines 11-15).

With regards to claim 12, Christopoulos discloses an image data receiving apparatus (client system—135 in figure 1) comprising: a receiving unit (135 in figure 1) that receives image data; and a control unit (a control unit similar to the one on the transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20) that calculates said information concerning the transmission rate on the basis of a measured value of the transmission rate (paragraph 0039, lines 5-26) of a network (network characteristics—paragraph 0035, lines 8-11, paragraph 0039, lines 5-26, and figure 3) through which said image data are to be transmitted and controls the amount of image data to be received in accordance with said information (transcoder hints—paragraph 0035, lines 8-13).

Regarding claim 13, Christopoulos discloses an image data receiving apparatus (client system—135 in figure 1) comprising: a receiving unit (135 in figure 1) that receives image data; and a control unit (a control unit similar to the one on the

transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20) that obtains a measured value of the transmission rate while transmitting said image data and controls the amount of image data to be transmitted in accordance with said measured value (paragraph 0039, lines 5-26).

As for claim 18, Christopoulos discloses an image transmitting method (paragraph 0035, lines 1-4) comprising: transmitting image data (paragraph 0039, lines 11-15); calculating information (transcoder hints—paragraph 0035, lines 8-13) concerning the transmission rate on the basis of a measured value of the transmission rate of a network (network characteristics—paragraph 0035, lines 8-11, paragraph 0039, lines 5-26, and figure 3) through which said image data are to be transmitted; and controlling the amount of image data to be transmitted (transcoder 125 in figure 1 uses the transcoder hints to control the image transmission—paragraph 0038, lines 4-11), in accordance with said information (transcoder hints—paragraph 0035, lines 8-13).

Regarding claim 20, Christopoulos discloses an image receiving method comprising: receiving image data (client system, 135 in figure 1, receives the image data—paragraph 0039, lines 9-15); calculating information (transcoder hints—paragraph 0035, lines 8-13) concerning the transmission rate on the basis of a measured value of the transmission rate of a network (network characteristics—paragraph 0035, lines 8-11, paragraph 0039, lines 5-26, and figure 3) through which

said image data are to be transmitted; and controlling the amount of image data to be received (a control unit similar to the one on the transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20), in accordance with said information (transcoder hints—paragraph 0035, lines 8-13).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos (US 2001/0047517) in view of Enari (US 5,847,840).

Regarding claim 4, Christopoulos discloses an image data transmission apparatus (paragraph 0035, lines 1-4) comprising: a transmission unit (110 in figure 1) that transmits image data of a motion picture (paragraph 0046, lines 1-5 and figure 5); and a control unit (125 in figure 1) that controls the amount of image data to be transmitted in accordance with information (transcoder hints—paragraph 0035, lines 8-

13) concerning a receiving apparatus (client capabilities and user preferences at the client system—135 in figure 1 and paragraph 0038, lines 4-11 and figure 3) that receives said image data.

Christopoulos fails to disclose that the control unit controls the amount of image data to be transmitted in accordance with said information without reducing the number of frames included in said motion picture.

In analogous art, Enari discloses that the control unit controls the amount of image data to be transmitted in accordance with said information without reducing the number of frames included in said motion picture (column 7, line 56 – column 8, line 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Christopoulos' system to include motion picture transmission without reducing the number of frames included in said motion picture, as taught by Enari, for the benefit of providing the a clear motion video without any jitter.

As for claim 6, it is met by the combination of Christopoulos and Enari. In particular, Christopoulos discloses that the control unit detects performance speed of said receiving apparatus on said image data as said information (Christopoulos—bandwidth capabilities of the client system—paragraph 0040, lines 9-12).

With regards to claim 7, it is met by the combination of Christopoulos and Enari. In particular, Christopoulos discloses that the control unit detects the specifications of a display unit of said receiving apparatus as said information (Christopoulos—display capabilities of the client system—paragraph 0040, lines 9-12).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos (US 2001/0047517) in view of Ejiri (US 2001/0003532).

Considering claim 9, Christopoulos discloses a compression unit that compresses said image data to be transmitted (paragraph 0051, lines 5-13). Christopoulos further discloses utilizing a region of interest transcoding means to rule out less important background regions of an image (paragraph 0040, lines 1-8 and paragraph 0045, lines 9-25).

Christopoulos fails to explicitly disclose the extraction of low frequency components from said image data in accordance with said information.

In analogous art, Ejiri discloses extracting low frequency components from said image data (paragraph 0024, lines 1-4).

It would have been obvious to one of ordinary skill in the art to at the time the invention was made to modify Christopoulos' system to include the extraction of low

frequency components from said image data, as taught by Ejiri, for the benefit of transmitting dynamic image data in video communication systems.

10. Claims 14, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos (US 2001/0047517) in view of Ejiri (US 2001/0003532).

As for claim 14, Christopoulos discloses an image data receiving apparatus comprising: a receiving unit (135 in figure 1) that receives image data; a decoding unit that performs data processing on the received data (paragraph 0042, lines 11-15 and paragraph 0043, lines 1-14); and a control unit (a control unit similar to the one on the transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20) that controls the amount of image data to be received in accordance with information (transcoder hints—paragraph 0035, lines 8-13). Christopoulos further discloses that the received data is controlled in accordance with information concerning the client capabilities (i.e., depending on the available storage space of the server 110, which can be a part of a client system—paragraph 0035, lines 11-20).

Christopoulos fails to explicitly disclose controlling the amount of image data to be received in accordance with information concerning the amount of data stored in a buffer of the decoding unit.

In analogous art, Ejiri discloses that the amount of received data is controlled in accordance with information concerning the amount of data stored in a buffer (paragraph 0040, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Christopoulos' system to include controlling the received data is in accordance with information concerning the amount of data stored in a buffer, as taught by Ejiri, for the benefit of controlling data overflow or underflow.

Regarding claim 16, Christopoulos discloses an image data receiving apparatus (client system—135 in figure 1) comprising: a receiving unit (135 in figure 1) that receives image data; and a control unit (a control unit similar to the one on the transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20) that controls the amount of image data to be received in accordance with information (transcoder hints—paragraph 0035, lines 8-13) concerning the transmission rate of a network (network characteristics—paragraph 0035, lines 8-11, paragraph 0039, lines 5-26, and figure 3) through which said image data are to be transmitted.

Christopoulos fails to disclose that the said control unit monitors the amount of received data and instructs a transmission apparatus to terminate transmission of said image data when the receiving apparatus receives a predetermined component of the image data.

In analogous art, Ejiri discloses that the amount of received data is monitored and a transmission apparatus is instructed to terminate transmission of said image data when the receiving apparatus receives a predetermined component of the image data (paragraph 0040, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Christopoulos' system to include regulation of data transmission, as taught by Ejiri, for the benefit of controlling data overflow or underflow.

Considering claim 21, Christopoulos discloses an image receiving method comprising: receiving image data (client system, 135 in figure 1, receives the image data—paragraph 0039, lines 9-15); performing data processing on the received image data for displaying said image data (paragraph 0042, lines 11-15 and paragraph 0043, lines 1-14); and controlling the amount of image data to be received (a control unit similar to the one on the transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20). Christopoulos further discloses that the received data is controlled in accordance with information concerning the client capabilities (i.e., depending on the available storage space of the server 110, which can be a part of a client system—paragraph 0035, lines 11-20).

Christopoulos fails to explicitly disclose controlling the amount of image data to be received in accordance with information concerning the amount of data stored in a buffer of the decoding unit.

In analogous art, Ejiri discloses that the amount of received data is controlled in accordance with information concerning the amount of data stored in a buffer (paragraph 0040, lines 1-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Christopoulos' system to include controlling the received data is in accordance with information concerning the amount of data stored in a buffer, as taught by Ejiri, for the benefit of controlling data overflow or underflow.

11. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christopoulos (US 2001/0047517) in view of Enari (US 5,847,840).

Considering claim 17, Christopoulos discloses an image data receiving apparatus (client system—135 in figure 1) comprising: a receiving unit (135 in figure 1) that receives image data; and a control unit (a control unit similar to the one on the transmitting side can be used on the receiving side—125 in figure 1 and paragraph 0035, lines 18-20) that controls the amount of image data to be received in accordance with information (transcoder hints—paragraph 0035, lines 8-13) concerning the transmission rate of a network (network characteristics—paragraph 0035, lines 8-11, paragraph 0039, lines 5-26, and figure 3) through which said image data are to be transmitted. Christopoulos further discloses that the said image data is a motion picture (paragraph 0046, lines 1-5 and figure 5).

Christopoulos fails to disclose that the control unit controls the amount of image data to be transmitted in accordance with said information without reducing the number of frames included in said motion picture.

In analogous art, Enari discloses that the control unit controls the amount of image data to be transmitted in accordance with said information without reducing the number of frames included in said motion picture (column 7, line 56 – column 8, line 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Christopoulos' system to include motion picture transmission without reducing the number of frames included in said motion picture, as taught by Enari, for the benefit of providing the a clear motion video without any jitter.

With regards to claim 19, Christopoulos discloses an image transmitting method (paragraph 0035, lines 1-4) comprising: transmitting image data (paragraph 0039, lines 11-15) of a motion picture (paragraph 0046, lines 1-5 and figure 5); and controlling the amount of image data to be transmitted (transcoder 125 in figure 1 uses the transcoder hints to control the image transmission—paragraph 0038, lines 4-11) in accordance with information (transcoder hints—paragraph 0035, lines 8-13) concerning a receiving apparatus (client capabilities and user preferences at the client system—135 in figure 1 and paragraph 0038, lines 4-11 and figure 3) that receives said image data.

Christopoulos fails to disclose that the control unit controls the amount of image data to be transmitted in accordance with said information without reducing the number of frames included in said motion picture.

In analogous art, Enari discloses that the control unit controls the amount of image data to be transmitted in accordance with said information without reducing the number of frames included in said motion picture (column 7, line 56 – column 8, line 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Christopoulos' system to include motion picture transmission without reducing the number of frames included in said motion picture, as taught by Enari, for the benefit of providing the a clear motion video without any jitter.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2611


mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harun M. Yimam whose telephone number is 571-272-7260. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HMY


CHRISTOPHER GRANT
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600